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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,992

03/07/2005

Shridhar Mubaraq Mishra

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EXAMINER

RUTKOWSKI, JEFFREY M

ART UNIT

PAPER NUMBER

2619

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,992	<b>Applicant(s)</b> MISHRA ET AL.	
	<b>Examiner</b> JEFFREY M. RUTKOWSKI	<b>Art Unit</b> 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 February 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. **Claims 1-8** have been cancelled.

#### ***Drawings***

2. The replacement drawing for figure 1 filed on 02/29/2008 is objected to as failing to comply with 37 CFR 1.84(p)(4) because the corrected drawing sheet is not in compliance with 37 CFR 1.121(d) because the label "Replacement Sheet" or "New Sheet" is missing. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. **Claims 9-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair (US Pat. 6,778,495) in view of Gentry, Jr. (US Pat. 6,356,951), hereinafter referred to as Gentry.

5. For **claims 9 and 19**, Blair teaches a network environment where a packet is fragmented **331-333 [figure 2]**. Each fragment comprises a sequence header **351-353** (section identity information about each section). In Blair's invention a data stream is made up of delay-sensitive packets interleaved with packet fragments of other traffic (interleaved sections of a plurality of different packets) **[col. 7 line 20]**. Each network device has interfaces **61** and a packet decoder **63** interface that receives the data stream. The packet decoder **63** that also de-interleaves the stream data (identify and extract data) **[col. 10 lines 25-40, figure 4]**. The information is de-interleaved in a section-by-section manner by examining information contained in the header of each packet or fragment in the stream **[col. 10 lines 33-35]**.

6. It is unclear from the teachings of Blair if the packet decoder **63** contains a header parser. Gentry teaches a header parser **106** interfaces with an Input Processing Module **104 [figure 1A]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to include a header parser in Blair's invention to determine the format of a packet **[Gentry, abstract]**.

7. For **claim 10**, the combination of Blair and Gentry teach a pointer value is initially set to point to the twelfth byte of the Layer 2 protocol header and to read the two-byte value. The two-byte value determines whether the packets are Virtual Local Area Network (VLAN) tagged packets or 802.3 Ethernet with LLC SNAP encapsulation **[Gentry, col. 17 lines 25-36, col. 18 line 22]** (identify structural features of the packets using the section identity information and the sections of data). A completion descriptor (user programmable registers) is used to hold an offset value to locate the beginning of a packet portion of a frame **[Gentry, col. 57 lines 25-40]**. If the packet is identified as a Transmission Control Protocol (TCP) packet, the offset to the data

portion is identified by multiplying the value of the TCP Header Length field by four [**Gentry, col. 19 lines 60-65**] (employ the offset information stored in the user programmable registers to identify and extract data from the packets in locations defined by the identified structural features of the packets and the offset information).

8. For **claims 11 and 14**, the combination of Blair and Gentry suggests the use of a scanning section by disclosing a parser method that identifies the type of Layer 2 and Layer 3 information in a packet [**Gentry, figures 4A-B**] (wherein the parsing unit further comprises a scanning section configured to identify the structural features, the structural features including an identification of a location of layers of data in the packets). The combination of Blair and Gentry also suggests the use of a parser section by disclosing information retrieved from a Transmission Control Protocol (TCP) header can be used to locate the data portion of a packet [**Gentry, col. 19 lines 57-65 and figures 4A-B**] (parser section which uses the output of the scanning section and the offset information to extract the data).

9. For **claims 12, 17 and 18**, the combination of Blair and Gentry teach VLAN tags can be detected in the layer 2 header portion of a packet **404** [**Gentry, figure 4A**] (wherein the scanning section is further configured to identify tagged packets).

10. For **claims 13 and 15**, Blair teaches a network environment where a packet is fragmented **331-333** [**figure 2**]. Each fragment comprises a sequence header **351-353** (section identity information about each section). A load balancing algorithm **49** (one or more user programmable registers) is used to transmit a data stream [**figure 3**]. The data stream is made up of delay-sensitive packets interleaved with packet fragments of other traffic (interleaved sections of a plurality of different packets) [**col. 7 line 20**]. Each network device has interfaces **61** for

receiving the data stream and a packet decoder **63** that de-interleaves the stream data (extract data from data sections) [**col. 10 lines 25-40, figure 4**].

11. It is unclear from the teachings of Blair if the packet decoder **63** contains a header parser. Gentry teaches a header parser **106** that receives sequential data [**figure 1A**]. A completion descriptor contains an offset to locate the beginning of a packet portion of a frame [**col. 57 lines 25-40**] (claim 15: one or more user-programmable registers to store offset information). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include a header parser in Blair's invention to determine the format of a packet [**Gentry, abstract**].

12. For **claims 16 and 22**, the combination of Blair and Gentry teach a layer 2 header is identified by setting a pointer to point to the twelfth byte of the layer 2 protocol [**Gentry, col. 17 lines 20-30 and figures 4A-B**] (a second parser which extracts data using predetermined offset information). If the Internet Protocol (IP) header of the packet indicates TCP. Then the pointer is incremented to reach the beginning of the TCP header [**Gentry, col. 19 lines 25-32**] (a first parser which extracts data identified using offset information stored in the user-programmable registers).

13. For **claims 20 and 26**, the combination of Blair and Gentry teaches a pointer is used in parsing the packet is initialized and initially set to point to the twelfth byte of the Layer 2 protocol header and read the two-byte value, to determine whether the packets are Virtual Local Area Network (VLAN) tagged packets or 802.3 Ethernet with LLC SNAP encapsulation [**Gentry, col. 17 lines 25-36, col. 18 line 22**] (identifying structural features of the packets using the section identity information and the sections of data; wherein the identifying structural features step includes identifying tagged packets). Figures 4A-4B show how a packet is parsed.

Once the packet is identified as a TCP packet, the offset to the data portion is identified by multiplying the value of the TCP Header Length field by four [**Gentry, col. 19 lines 60-65**] (employing offset information to identify and extract data from the packets in locations defined by the identified structural features of the packets and the offset information).

14. For **claim 21**, the combination of Blair and Gentry teaches a completion descriptor that contains an offset to locate the beginning of a packet portion of a frame [**Gentry, col. 57 lines 25-40**] (further comprising the step of storing at least some of the offset information in user programmable registers).

15. For **claim 23**, the combination of Blair and Gentry suggests the use of two parsers. Figure 4A of Gentry discloses a parser that operates on layer two header information. While figure 4B of Gentry discloses a parser that operates on layer three header information (wherein the processing step further comprises extracting data using a first parser and a second parser).

16. For **claim 24**, the combination of Blair and Gentry teaches a parser method capable of identifying layer 2 and layer 3 header information [**Gentry, figures 4A-4B**] (wherein the identifying structural features step includes identifying a location of layers within the packets).

17. For **claim 25**, the combination of Blair and Gentry teach a parser capable of detecting a VLAN tagged header **404** [**Gentry, figure 4A**] (wherein the identifying structural features step includes identifying tagged packets).

18. For **claims 27-28**, the combination of Blair and Gentry teaches a parser capable of identifying LLC SNAP information **410** [**Gentry, figure 4A**] (wherein the identifying structural features step includes identifying snapped packets).

***Response to Arguments***

19. Applicant's arguments with respect to **claims 9-28** have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215.

The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski  
Patent Examiner  
04/16/2008

/Hassan Kizou/

Supervisory Patent Examiner, Art Unit 2619